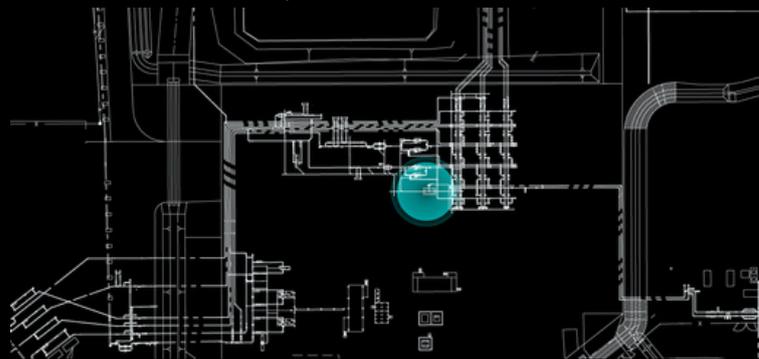




# Early Detection to Reduce Emissions in Pump Station Deadlegs of Pipeline and Terminal Operations

Reducing Environmental Risks, Lowering Cleanup Costs, and Mitigating Product Loss



## PROBLEM

Unmanned sites can delay crude leak detection during weekly AVO inspections, leading to higher costs, contamination, product loss, safety risks, and reduced compliance and profitability.



## ASSET

Deadleg pipes at pump stations, prone to oil leaks, threaten surroundings, escalate cleanup efforts, and endanger workers through toxic exposure and fire risks.



## ALERT

- The mRegz™ AirCompliance solution flagged three Category 1 alerts with emissions peaks of 111.384 ppm, 114.273 ppm, and 28.777 ppm, precisely mapped to affected zones.
- Alerts were routed to the pipeline control center, enabling rapid identification and prioritized action for impacted areas.
- Camera footage was reviewed, and an operator was dispatched to inspect pump stations, ensuring comprehensive evaluation and resolution.



## INVESTIGATION

- Leak caused by internal corrosion on an uncoated welded tee, creating a ½-inch hole.
- Quick operator action triggered immediate shutdown, preventing escalation.
- Response teams isolated the leak within an hour and prepared for repairs.



## RESULT

The mRegz™ AirCompliance solution detected a VOC leak at dusk, preventing overnight escalation when crude oil is harder to spot. Quick action saved **up to 500 barrels** of crude oil and avoided **up to \$1.2 million** in cleanup costs. The response minimized environmental impact and led to proactive monitoring to prevent similar incidents at other sites.



Figure 1: mRegz™ AirCompliance Identified Leak

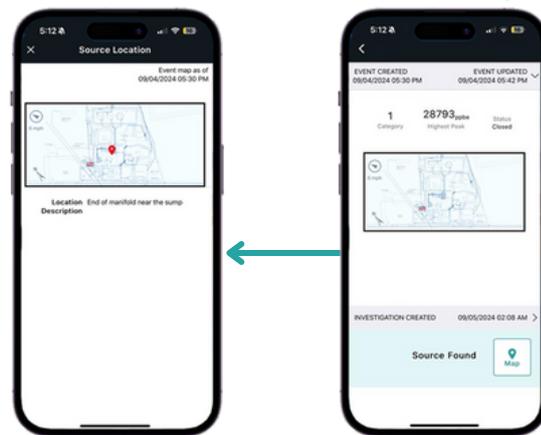


Figure 3: Investigation Started

Figure 2: Notification Sent to User



## TRANSFORMATION

The mRegz™ AirCompliance solution transformed emissions management at pump station dead legs in pipelines and terminals. Early detection enabled swift response, preventing product loss. This proactive approach reduced environmental and financial risks, improving safety and efficiency.